2-5-1993

Getting Lost in the Wild May be a Thing of the Past

The University of Dayton *News Release*

Feb. 5, 1993
Contact: Pam Huber

**GETTING LOST IN THE WILD
MAY BE A THING OF THE PAST**

DAYTON, Ohio — The same global positioning satellites that help guide military missiles to their targets will one day help people find their way when they're lost.

Human factors psychologist Leslie Whitaker, associate professor at the University of Dayton, has created the prototype for NAVAID, a computerized navigation system for hikers that can display maps, routes and terrain features. It will also show the distance and elevations of specific routes.

When fully developed, the aid could be used by hikers and other navigators.

NAVAID will find its current location using signals from global positioning satellites, and the operator will punch in the destination. Using a map database, NAVAID will calculate the shortest and least strenuous route between the two locations. It will display terrain features along the route using a ground's eye view so that what is shown on the screen will match what the user sees, as long as the user stays on course. If the views don't match, the user knows he or she has veered from the course and can backtrack to correct.

Systems that simulate man-made environments are already in use by planners and engineers. But highways and street signs would be of little use to a hiker lost in the countryside in a snowstorm or thick fog.

To find successful navigation techniques for off-road natural environments, Whitaker interviewed military scouts and orienteers (people who participate in recreational cross-country competitions using maps and compasses to navigate unfamiliar territory). She found

-more-

OFFICE OF PUBLIC RELATIONS
300 College Park Dayton, Ohio 45469-1679 (513) 229-3241 FAX: (513) 229-3063

that as route markers "man-made objects are golden to orienteers, but they don't trust vegetation as a marker because it changes from year to year." Navigators say that streams, canyons and other strong terrain features are also valuable. The implication, says Whitaker, is that NAVAID should concentrate on man-made markers such as fence posts and sheds and natural markers that are unlikely to change. Indicating groups of trees or lines of bushes would be of little use to hikers.

Less-experienced navigators can stubbornly cling to their notions of direction and location, even to the point of ignoring what's in front of their eyes. "They try to fit the map to the world," says Whitaker. "They say 'I know where I am, so the map must be wrong.' Or they believe that the mountain they see in front of them is just off the edge of the map they're using."

Her study on navigation appears in the current issue of *Scientific Journal of Orienteering*, the international research journal for orienteers.

Whitaker, a veteran hiker who has scaled Mount Fuji and the Matterhorn and trekked through Machu Picchu, has created a prototype for the NAVAID system. The idea, she says, is to make the system as small and light as possible so that it's easily carried by hikers. A version to be used in trucks, cars and boats would require strong protection and may be the size of a microwave oven.

"NAVAID could start off as 'a rich man's toy,' but hand-held calculators and small tape recorders started out that way too," says Whitaker. "Trickle-down technology apparently works for many hi-tech electronic gadgets."

-30-

For media interviews, call **Leslie Whitaker** at (513) 229-2160.